BRIDGES IN MATHEMATICS 1

GRADE 1 SUPPLEMENT

Set C6 Geometry: 2-D Shapes Attributes Calendar Pattern

Includes

February Calendar Pattern C6.1

Skills & Concepts

- ★ identify, describe, compare, and draw triangles, parallelograms, rectangles, rhombuses, and squares
- ★ describe geometric attributes of shapes to determine how they are alike and different
- ★ recognize shapes when viewed from different perspectives and orientations
- ★ identify, describe, and extend repeating patterns
- ★ read aloud numerals from 0 to 31
- ★ identify ordinal positions through the 31st

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Bridges in Mathematics Grade 1 Supplement
Set C6 Geometry: 2-D Shapes Attributes Calendar Pattern

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P0510

Bridges in Mathematics is a standards-based K–5 curriculum that provides a unique blend of concept development and skills practice in the context of problem solving. It incorporates the Number Corner, a collection of daily skill-building activities for students.

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Set C6 ★ February Calendar Pattern

CALENDAR GRID

2-D Shapes Attributes

Overview

This set of Calendar Grid markers replaces the student-made markers in the month of February, and provides opportunities for first graders to identify, describe, and compare the attributes of triangles and various quadrilaterals.

Skills & Concepts

- ★ identify, describe, compare, and draw triangles, parallelograms, rectangles, rhombuses, and squares
- ★ describe geometric attributes of shapes to determine how they are alike and different
- ★ recognize shapes when viewed from different perspectives and orientations
- ★ identify, describe, and extend repeating patterns
- ★ read aloud numerals from 0 to 31
- ★ identify ordinal positions through the 31st

You'll need

- ★ Calendar Grid pocket chart
- ★ Month and Year Calendar Grid cards
- ★ February 2-D Shapes Attributes Calendar Markers (available at **http://gotomlc.org/calmarkers**) Print 1 copy of the calendar marker sheets, preferably in color, single-sided, on white cardstock. Cut the calendar markers apart and laminate if desired.
- ★ Calendar Grid Observations sheet from Set C2 (see Advance Preparation)
- ★ helper jar containing a popsicle stick for each child with his/her name on it
- ★ individual chalkboard/whiteboard, chalk/pen, and eraser for each student (optional)
- ★ geoboards and rubber bands (optional)

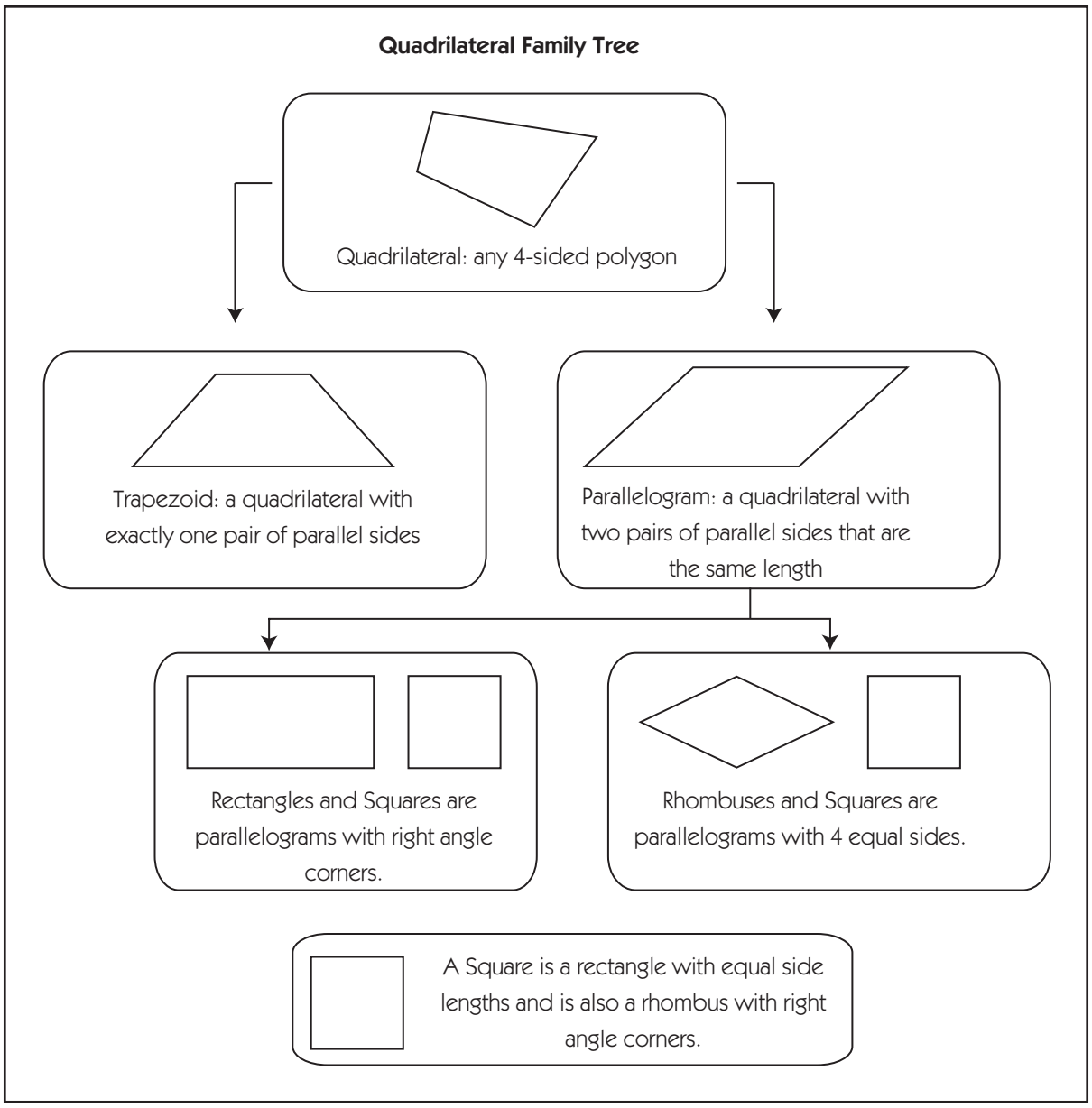
Advance Preparation Erase the Calendar Grid Observations sheet from Set C2. Draw 5 columns. Label the columns at the top of the first sheet as shown below for use with this month's markers.

Calendar Grid Observations				
Date	Shape Name	Sides	Corners	Other

Background for the Teacher *This month's pattern features triangles, rectangles, rhombuses, and squares that vary in size and orientation. The pattern also includes parallelograms, which are less familiar to most first graders than the other four shapes. Here is some information about parallelograms for your reference.*

Any shape with 4 sides is called a quadrilateral. Trapezoids and parallelograms are two different types of quadrilaterals. Rectangles, rhombuses, and squares are all specialized types of parallelograms, as shown in the diagram on the next page.

February Calendar Pattern (cont.)



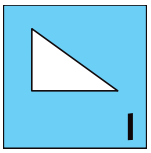
All of the shapes on this month's odd-numbered calendar markers are triangles. The shapes on Markers 2, 10, 18, and 26 are parallelograms that are not rectangles, rhombuses, or squares. The shapes on Markers 4, 12, 20, and 28 are rectangles. The shapes on Markers 6, 14, 22, and 30 are rhombuses. The shapes on Markers 8, 10, and 24 are squares. The markers are sequenced in an ABAB pattern (triangle, quadrilateral; triangle, quadrilateral). They are also sequenced in a longer ABACADAE pattern that repeats 4 times over the course of the month (triangle, parallelogram, triangle, rectangle, triangle, rhombus, triangle, square; triangle, parallelogram, triangle, rectangle, triangle, rhombus, triangle, square).

While many first graders will describe the shapes on the markers in terms of what they look like (i.e., I know it's a rectangle because it looks like a window; I know it's a triangle because it looks like a mountain; I know it's a parallelogram because it looks like a squished rectangle), children should be expected to identify the number of sides and the number of corners (or vertices) for each shape. They should also be encouraged to identify some of the likenesses and differences between various shapes.

February Calendar Pattern (cont.)

Introducing the 2-D Shapes Attributes Calendar Grid Pattern

Open your first Number Corner lesson in February by directing students' attention to the calendar grid. Place the first marker in the correct pocket, and ask children to pair-share observations.



After a few moments, pull sticks from your helper jar to call on children to share their observations with the class.

> ***Students*** *It looks like one of those ramp blocks in the block corner.*
> *I think it's a triangle.*
> *I don't think it's a triangle. It doesn't look like the green pattern block.*
> *But some triangles are different, like they're long and skinny. They don't all have to be perfect.* .

It's not unusual for primary children to assert that a "real" triangle must have 3 equal sides. Guide students to understand that while all triangles have exactly 3 sides, those sides do not have to be equal in length.

> ***Teacher*** *Mathematicians tell us that triangles have 3 sides. Does this shape have 3 sides?*
>
> ***Students*** *Yep!*
>
> ***Teacher*** *Are you positively sure this shape has exactly 3 sides? Brady, would you like to come up here and point to each of the sides as we count them together?*
>
> ***Students*** *One, two, three.*
> *It has 3 sides. It must be a triangle.*
> *But triangles have to have sides all the same.*
>
> ***Teacher*** *Let's get one of the triangles from our pattern block set. What's the difference between the triangle on today's marker and the pattern block triangle?*
>
> ***Students*** *The pattern block one is small and green. That other one is big and white.*
> *The pattern block triangle is made out of wood. The one on the marker is just a picture.*
> *The pattern block has all the sides the same. On the triangle up there, one side is short and the other two sides are longer.*
>
> ***Teacher*** *Good observations. The pattern block and the shape on our marker are both triangles because each of them has exactly 3 sides. The pattern block shape is called an equilateral triangle because all 3 of its sides are the same length. The shape on our marker is not an equilateral triangle, but it is still a triangle.*

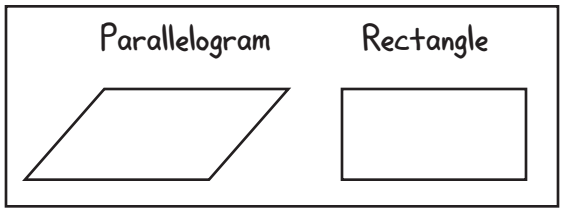
Once the shape has been identified as a triangle, work with input from the children to fill in the first row on the calendar observation sheet.

The second day of the month, ask students to pair-share observations about the shape on Marker 2, and then call on volunteers to share with the class.

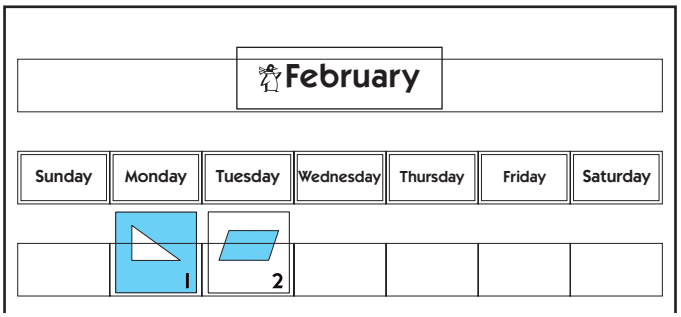
February Calendar Pattern (cont.)

Students *That's a weird shape!*
It looks like someone sat on a rectangle and squished it!
Yeah, it looks like a squashed box.

Explain that this shape is called a *parallelogram*. Write the word on the board along with a quick sketch and read it with the class several times. Next, sketch and label a rectangle on the board and ask students to describe how the parallelogram and rectangle are the same, and how they are different. Then work with students' input to fill in the second row on the calendar observation sheet.



Students *They both have 4 sides, but the first one has diagonal lines.*
The rectangle just goes up and down; that other one is slanted.
They both have 4 corners.
The parallelogram has corners that are more pointy.
It looks like of like a weird diamond.



Calendar Grid Observations

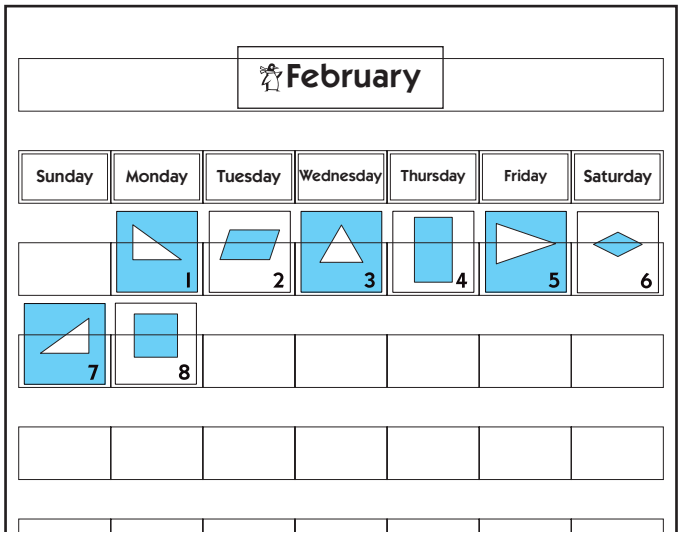
Date	Shape Name	Sides	Corners	Other
1	Triangle	3	3	sides are not equal
2	Paralleogram	4	4	has diagonal lines

Continuing through February with the Calendar Grid

Each day, have a helper point to the markers that have been posted in the pocket chart as the class names each shape. Have children predict what the next marker will show before you place it on the chart. Once the new marker has been posted, ask students to share their observations.

Teacher *Let's say the name of the shape on each marker we've posted so far, and then make some predictions about what we'll see on the marker for today. Alex, will you point to the markers as we name each shape?*

February Calendar Pattern (cont.)



Calendar Grid Observations

Date	Shape Name	Sides	Corners	Other
1	Triangle	3	3	sides are not equal
2	Paralleogram	4	4	has diagonal lines
3	Triangle	3	3	looks like green p block
4	Rectangle	4	4	looks like a door
5	Triangle	3	3	looks like a flag
6	Rhombus	4	4	looks like blue p block
7	Triangle	3	3	looks like a skate ramp
8	Square	4	4	all 4 sides are equal

Students *Triangle, parallelogram, triangle, rectangle, triangle, rhombus, triangle, square.*

Teacher *Talk with the person next to you about what shape we might see on the marker for today. Put your thumbs up when you have an idea, and I'll pull sticks from the jar to pick children to share with the class.*

Students *Triangle! It has to be a triangle.*
It goes triangle, other shape, triangle, other shape, like that, so today has to be a triangle.
I think the one after today is going to have 4 sides. It always goes 3 sides, 4 sides, 3 sides, 4 sides.
Maybe it will be a triangle today, and then a rectangle tomorrow.

Here is a summary of the questions and prompts mentioned so far, as well as some others you might use through the month:

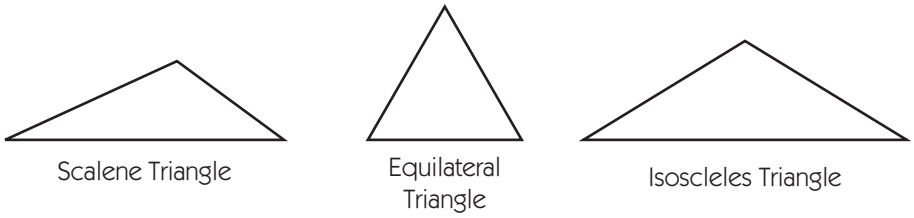
- Let's name the shape on each marker.
- What shape do you think we'll see on the next marker? Why?
- How can you tell if something is a triangle (parallelogram, rectangle, rhombus, square)?
- How do you know that the shape on Marker 4 is not a triangle? How do you know that the shape on Marker 7 is not a rhombus?
- How are the shapes on Markers 3 and 8 (1 and 4, 2 and 7) different? How are they alike?
- What shape do you see on the 4th (9th, 13th, 21st) marker?
- I see a marker on the calendar grid with a shape that has 3 equal sides. Which marker am I thinking of? I see a marker on the calendar grid with a shape that has 4 equal sides. Which marker am I thinking of? Is there more than one correct answer?

Extensions

- Have children each make a prediction about the shape on the next marker by drawing it on an individual whiteboard or chalkboard. When the marker is posted, ask them to modify their drawing so it matches the actual shape.
- Encourage children to predict the shape that will appear on the marker the following day by building it on a geoboard and setting their boards near the calendar display.

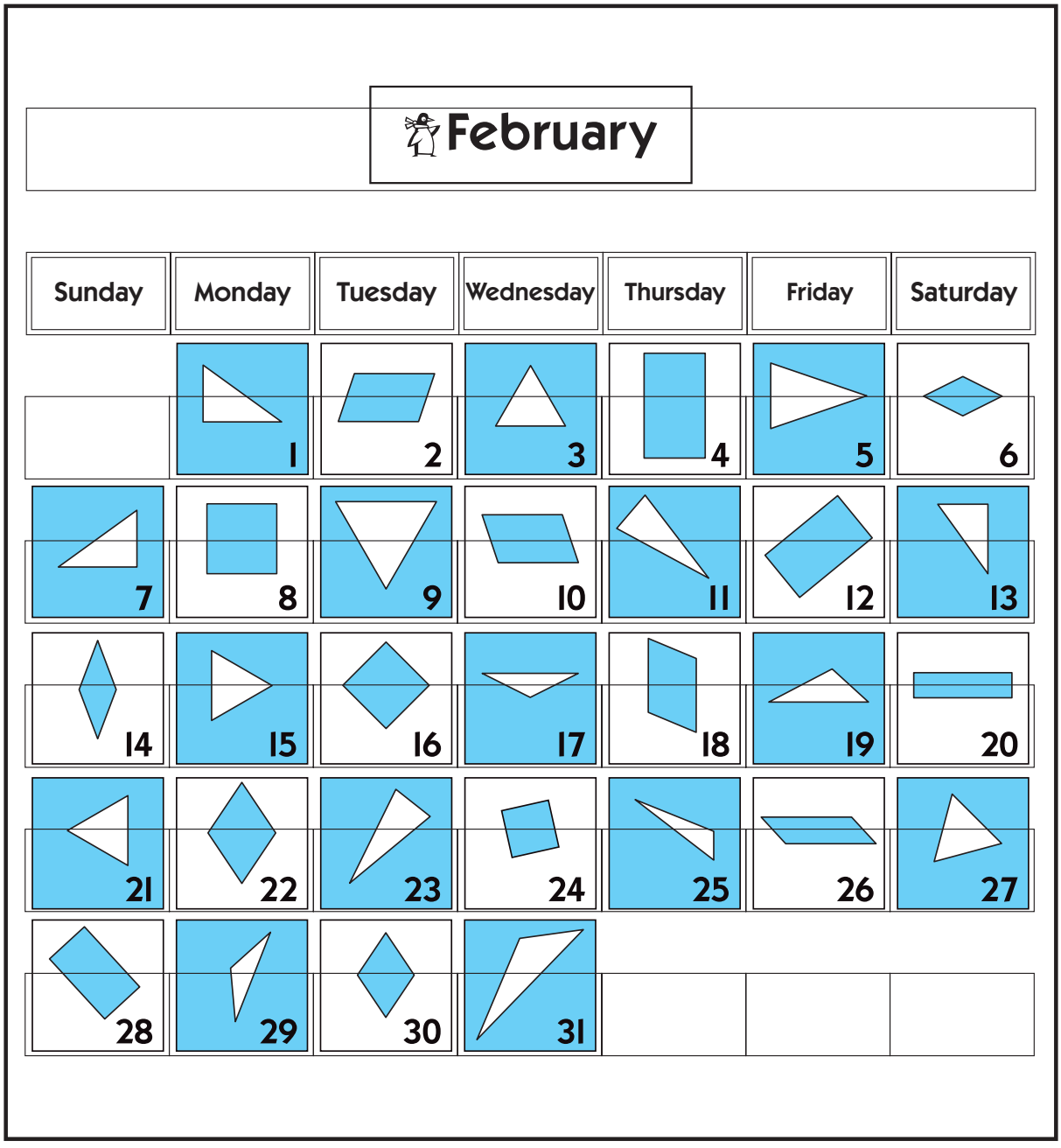
February Calendar Pattern (cont.)

- The markers feature 3 different types of triangles: scalene (no sides equal), equilateral (all 3 sides equal), and isosceles (2 sides equal). Introduce the three types of triangles by name to students early in the month, and encourage them to look for examples of each type in the markers as the month progresses.



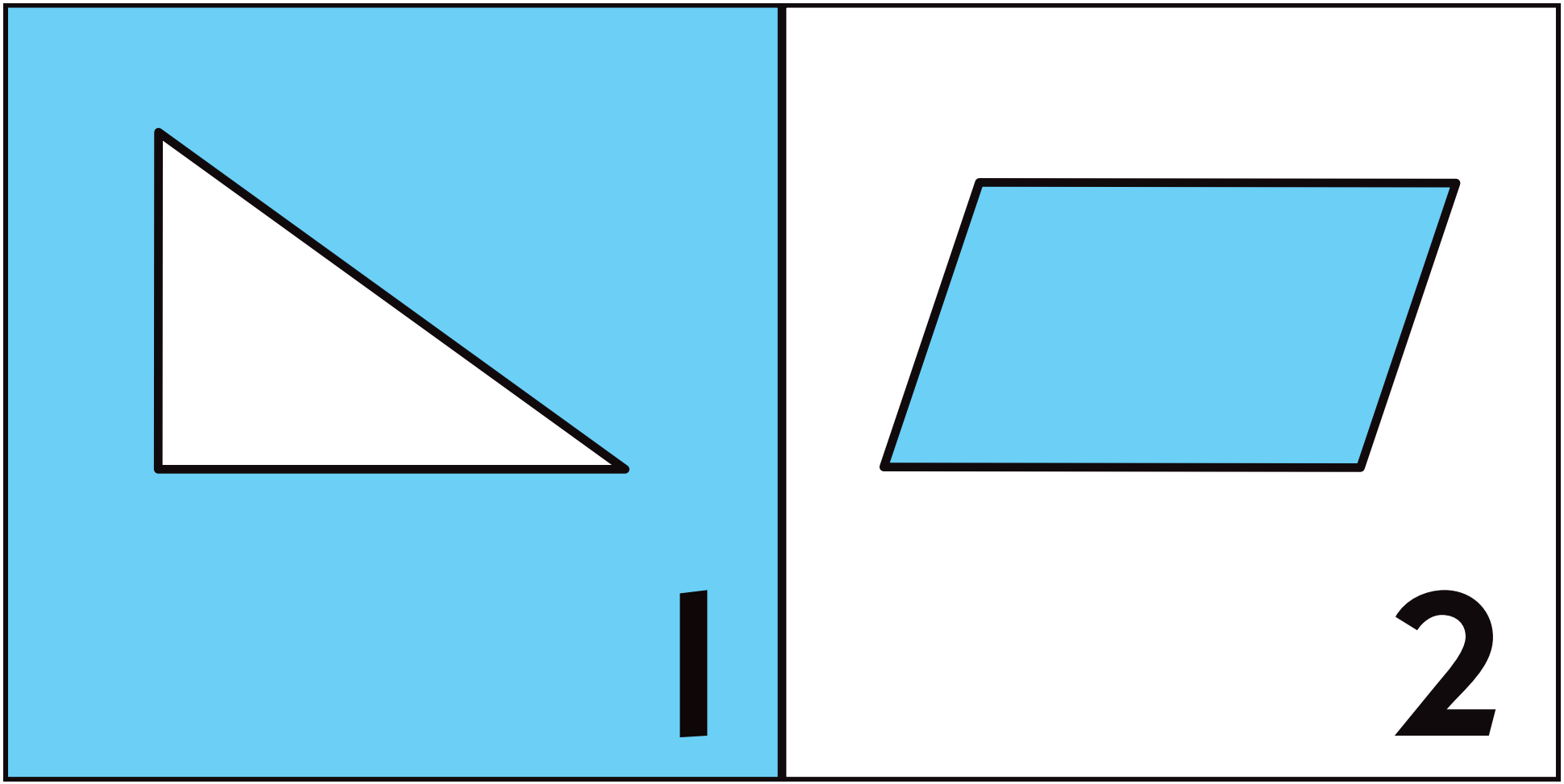
February Calendar Pattern (cont.)

NOTE Below is a representation of the February calendar grid. The full-size calendar markers are available at **http://gotomlc.org/calmarkers**.



Print 1 copy of the calendar marker sheets, preferably in color, single-sided, on white cardstock. Cut the calendar markers apart and laminate if desired.

February 2-D Shapes Attributes Calendar Markers Sheet 1 of 16



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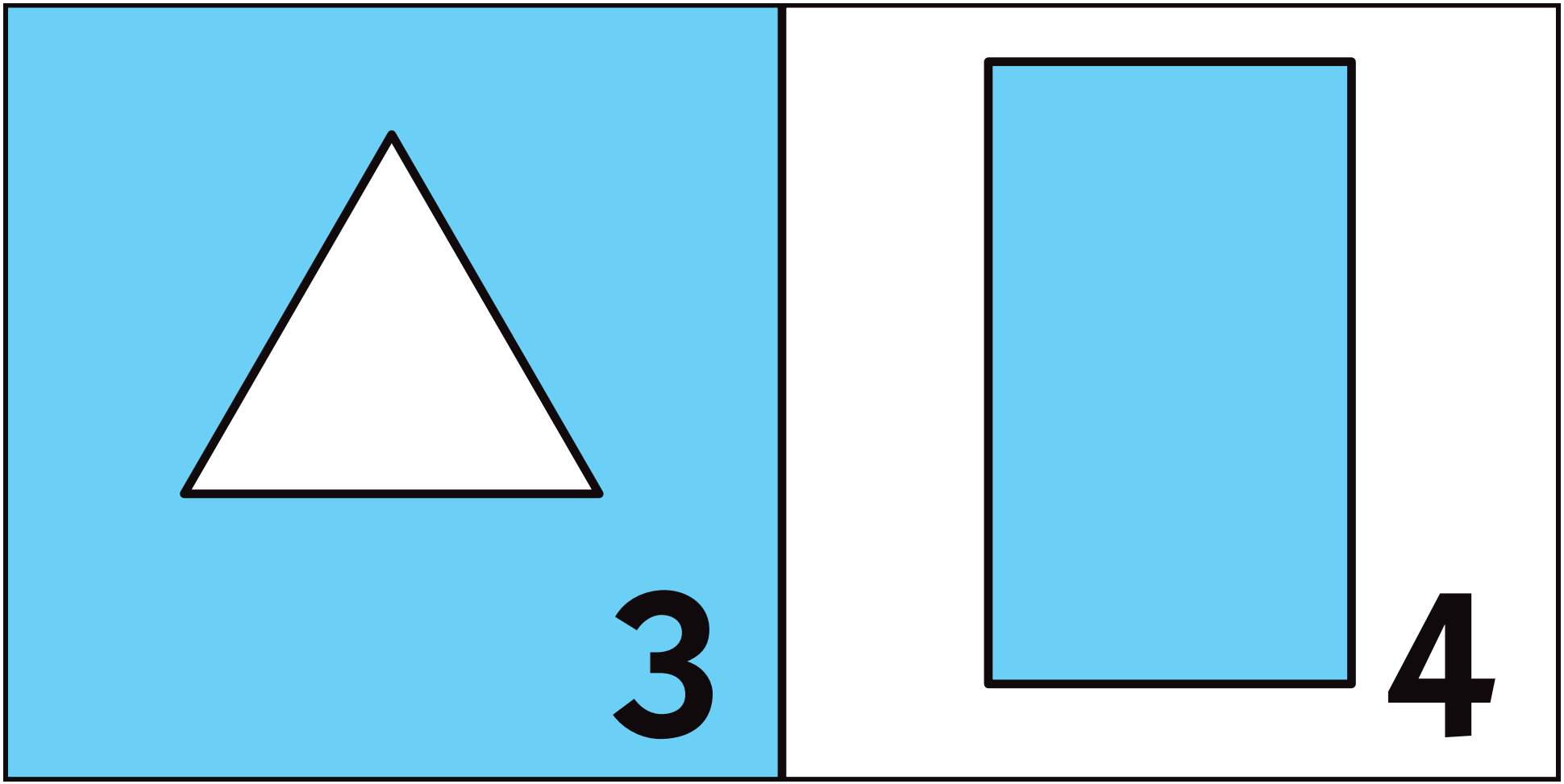

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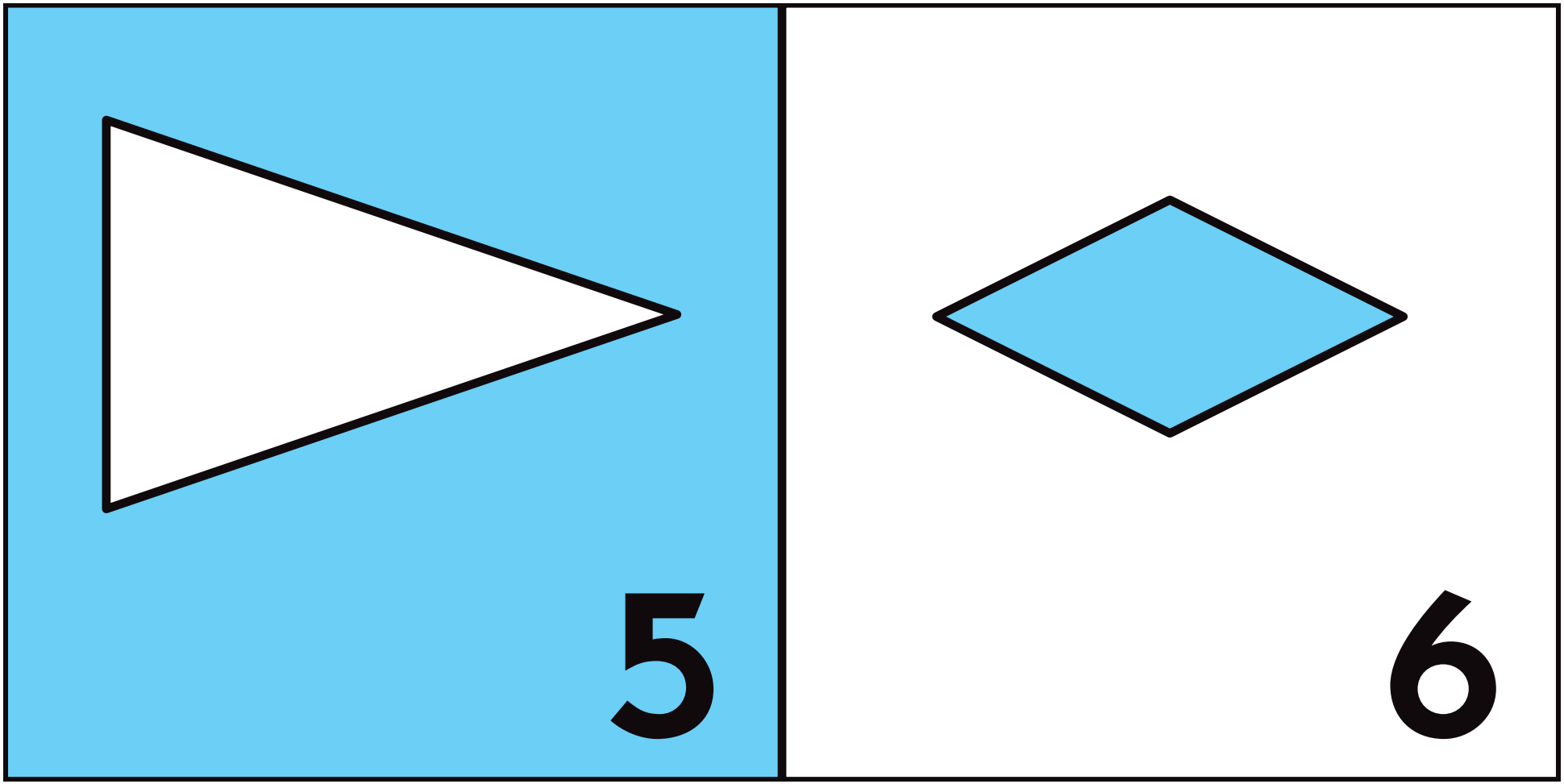

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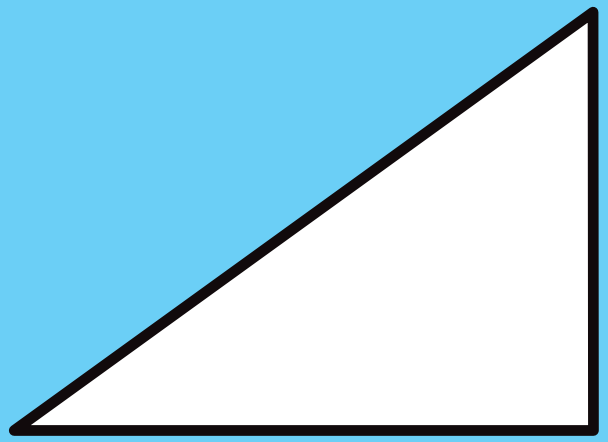

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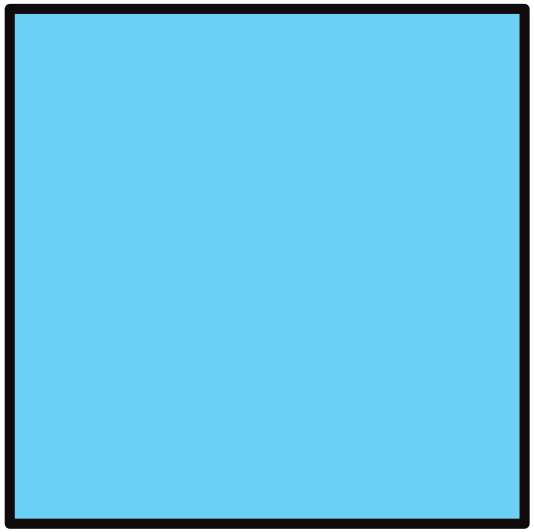

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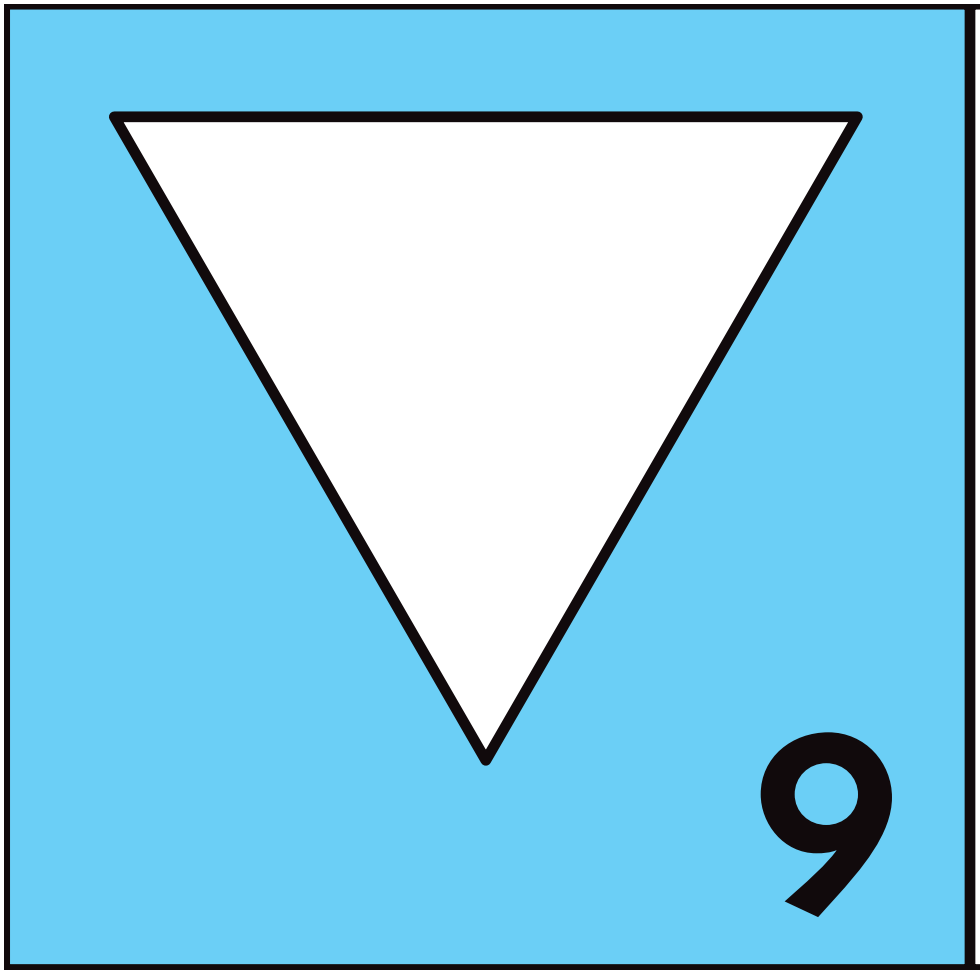
February 2-D Shapes Attributes Calendar Markers Sheet 5 of 16



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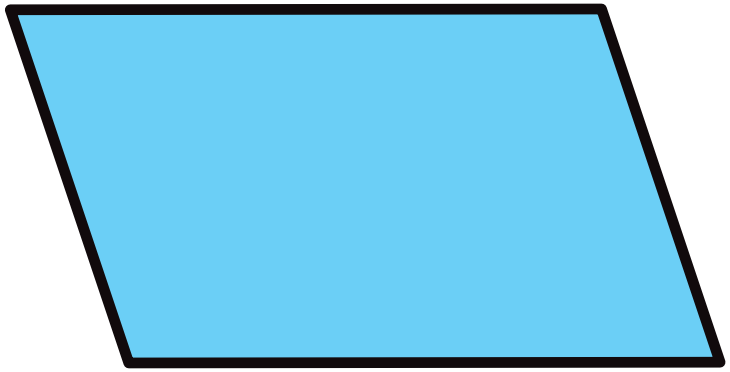

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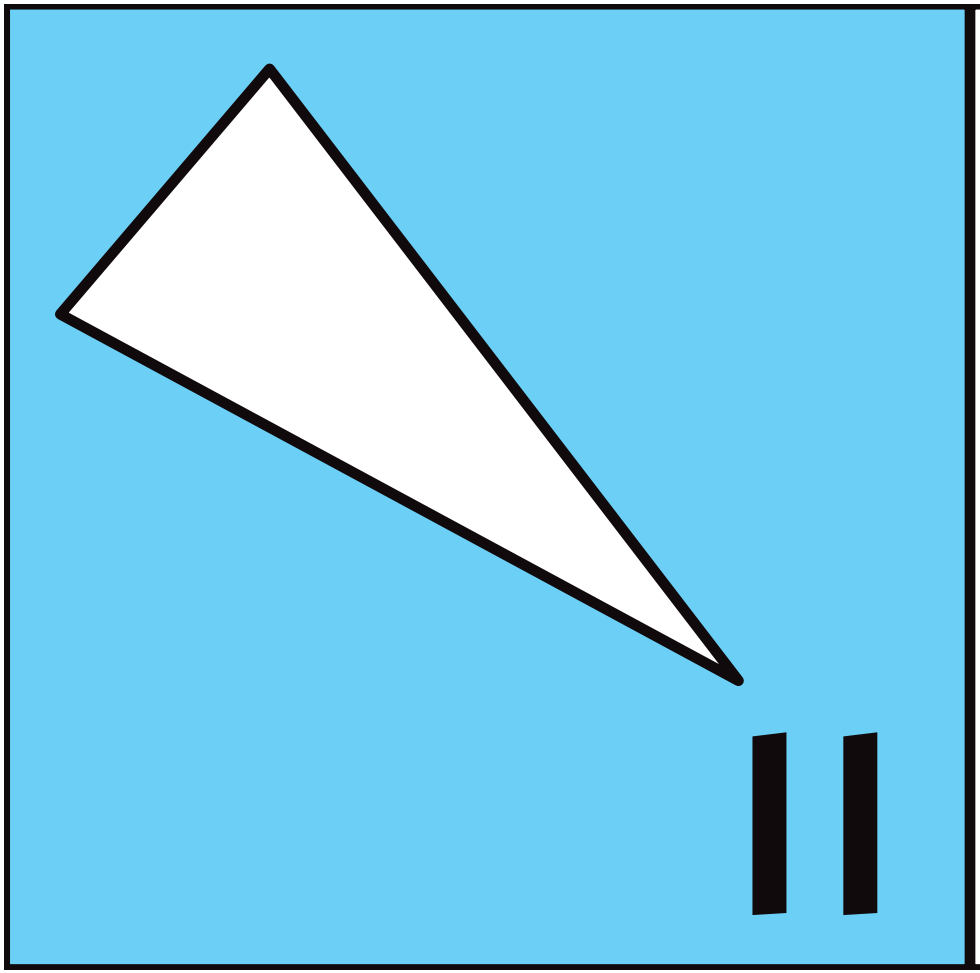

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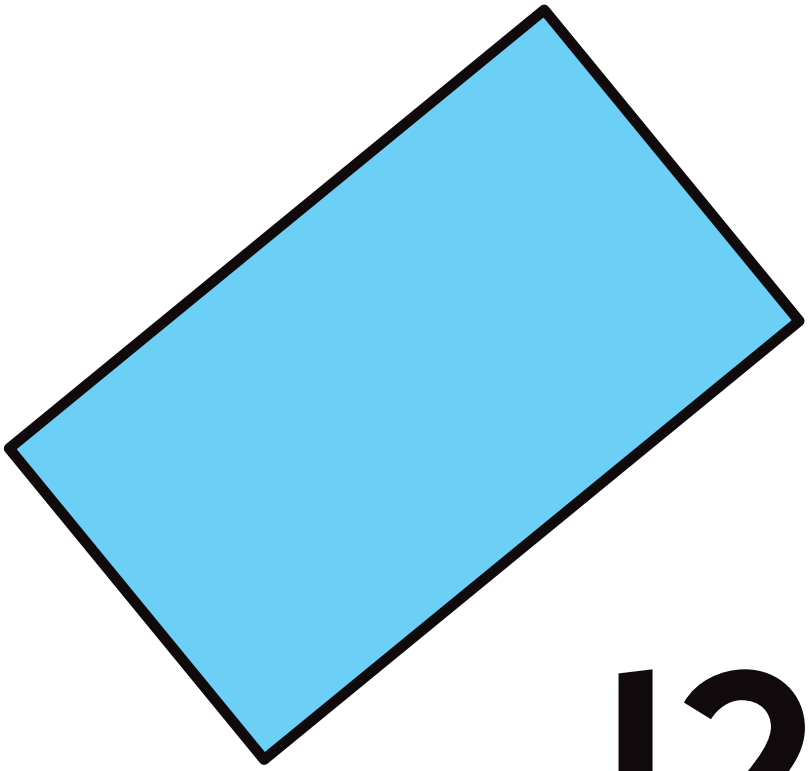

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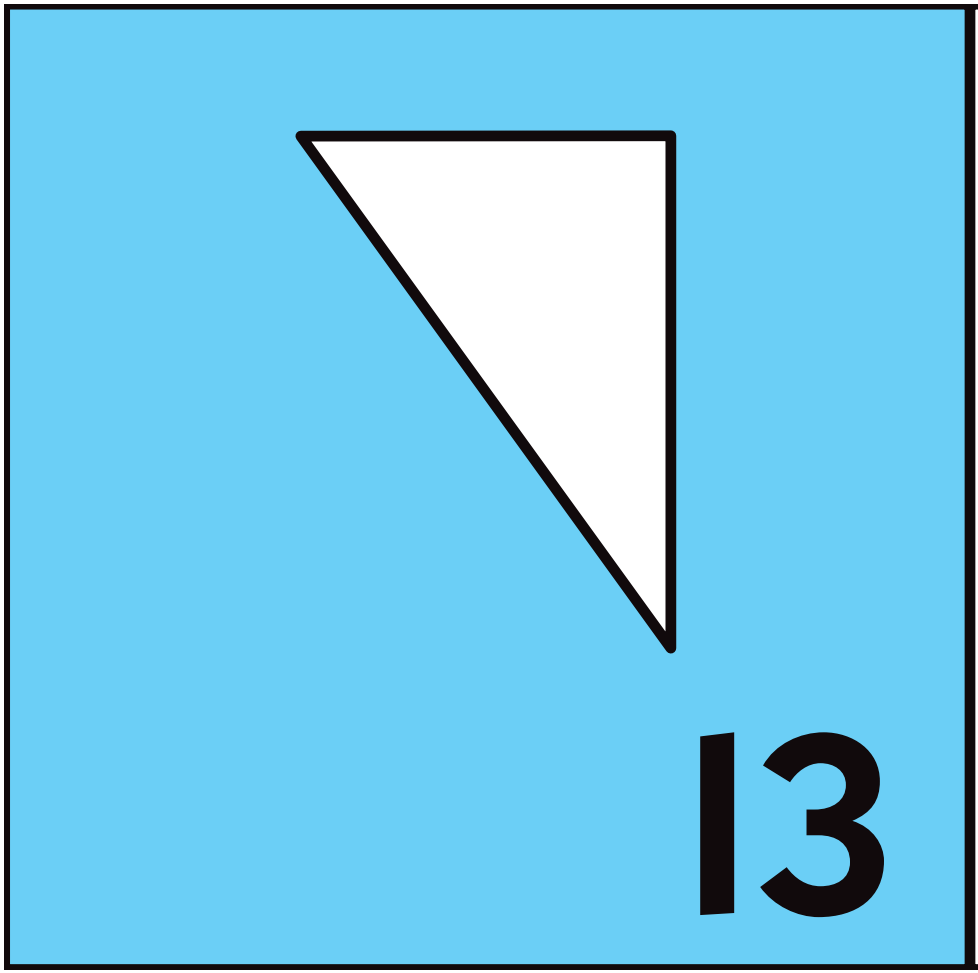

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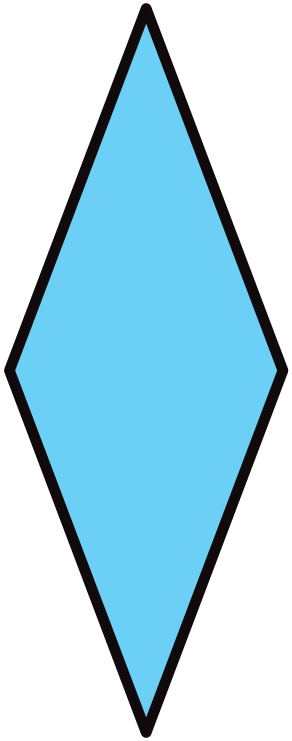

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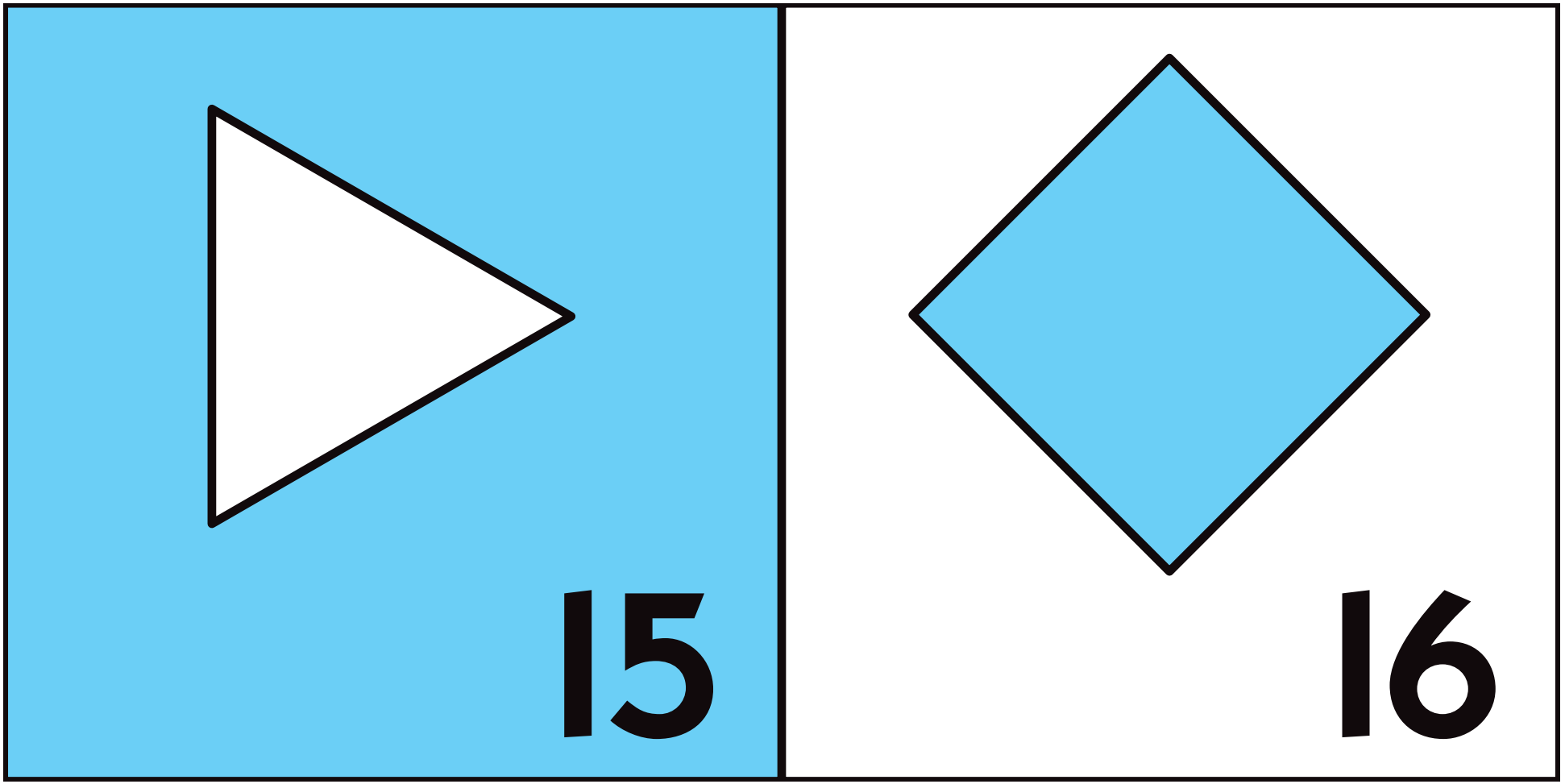

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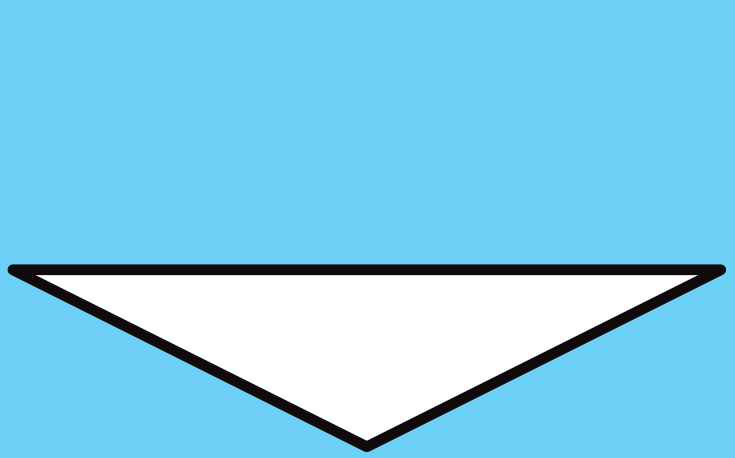

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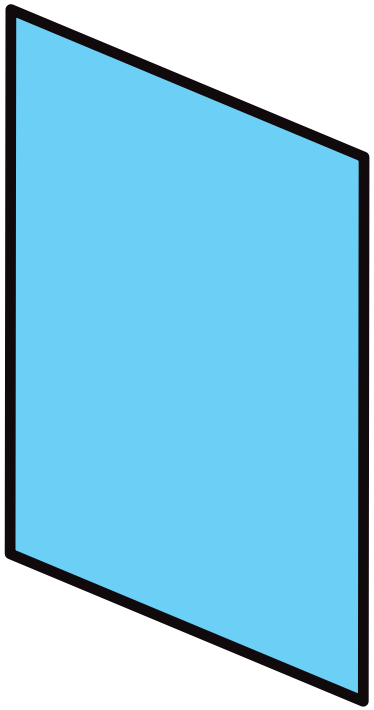

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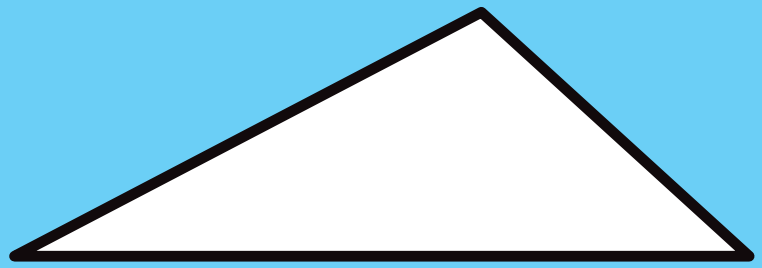
February 2-D Shapes Attributes Calendar Markers Sheet 10 of 16



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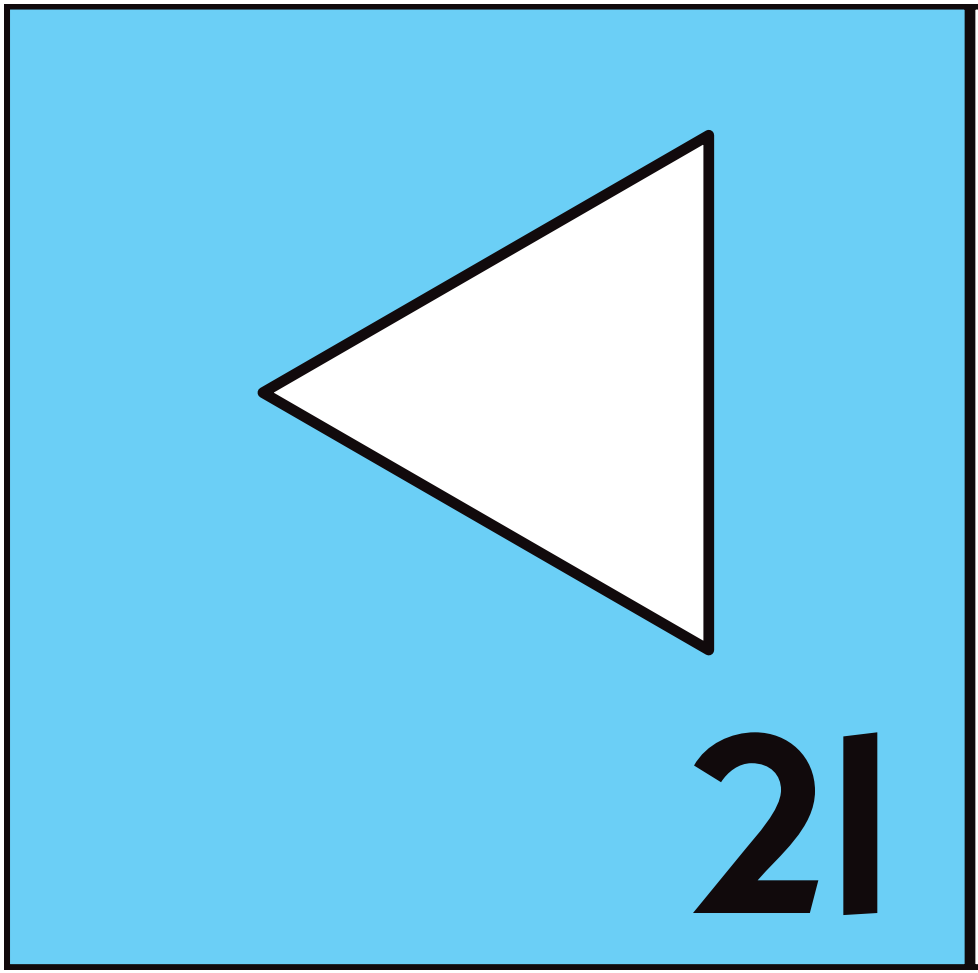
February 2-D Shapes Attributes Calendar Markers Sheet 11 of 16



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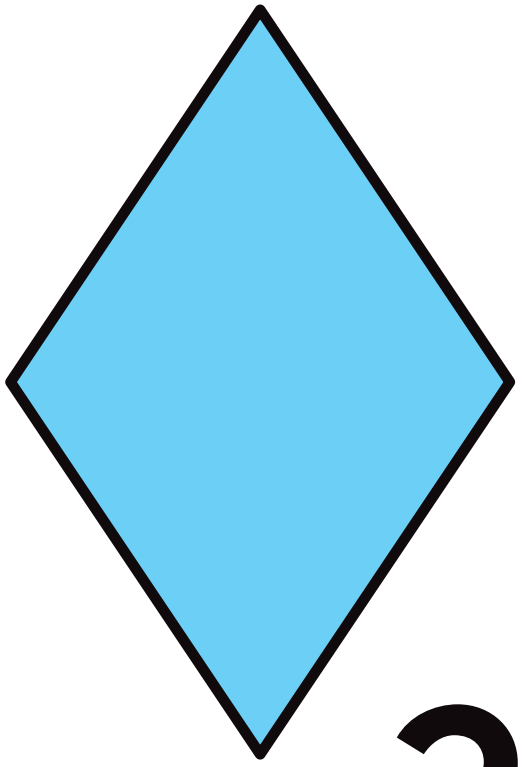

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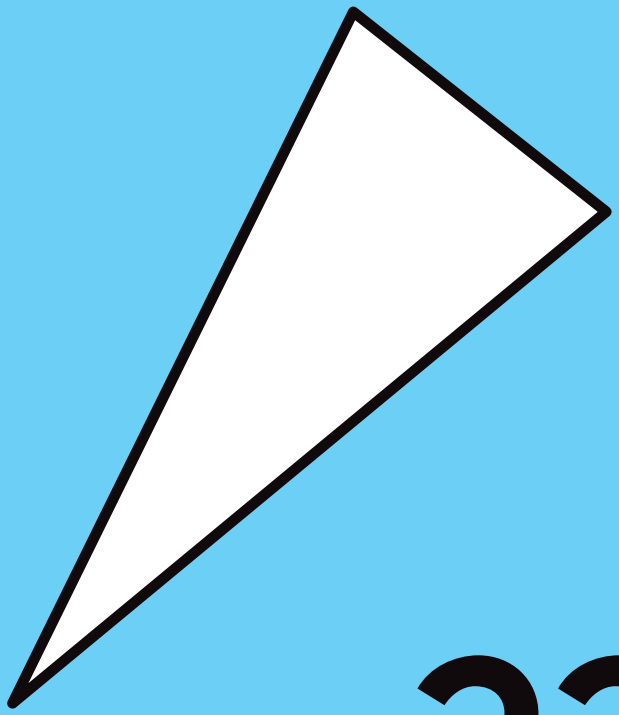
February 2-D Shapes Attributes Calendar Markers Sheet 12 of 16



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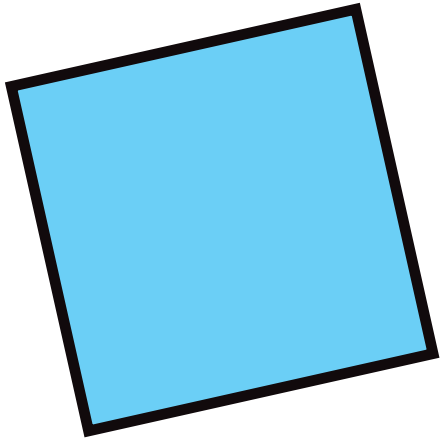

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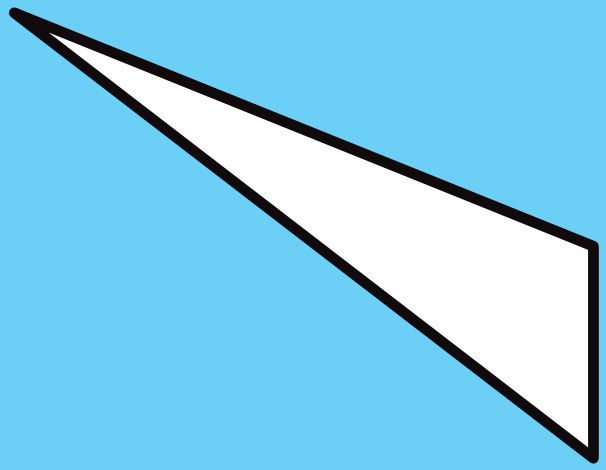

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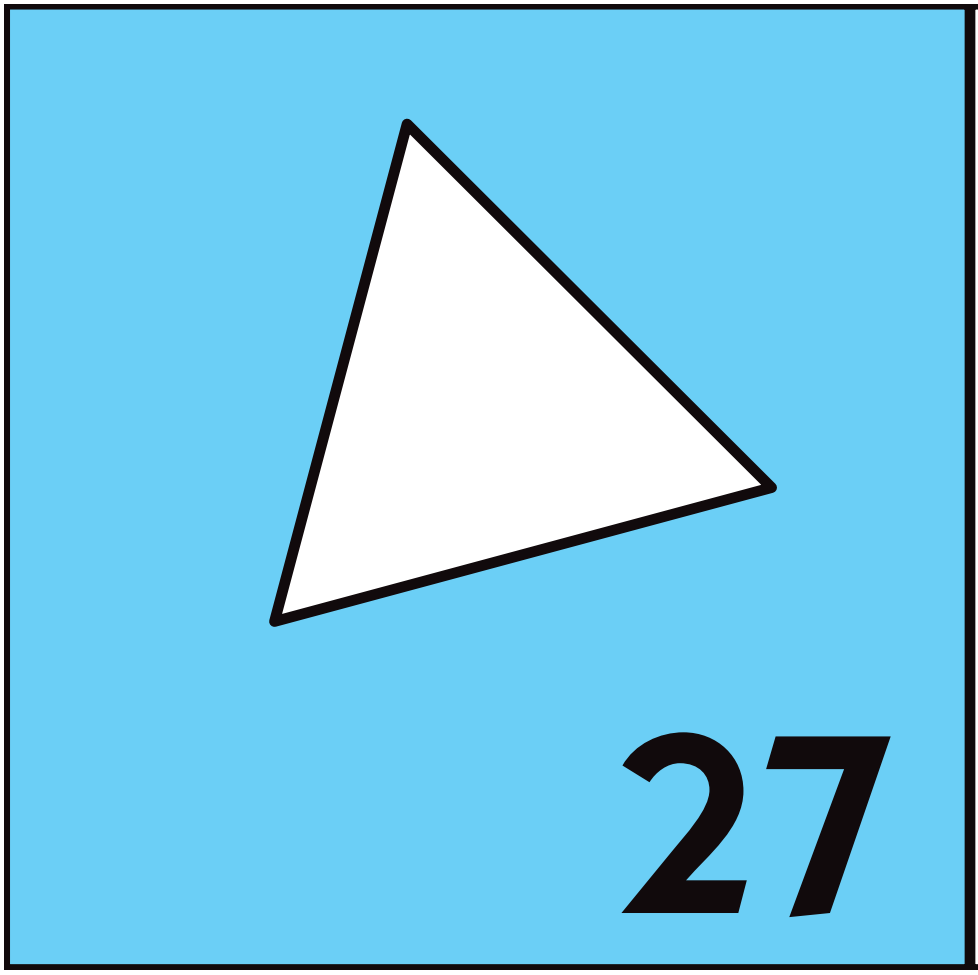
February 2-D Shapes Attributes Calendar Markers Sheet 14 of 16



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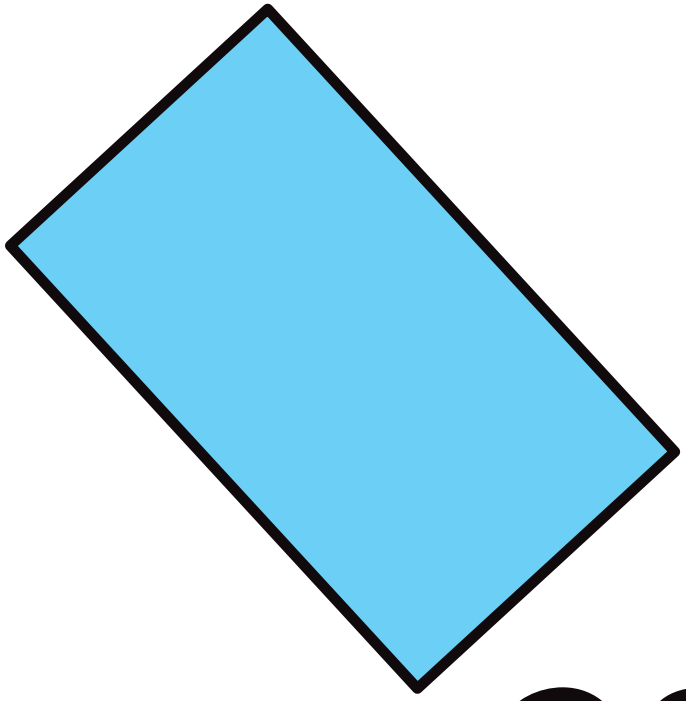

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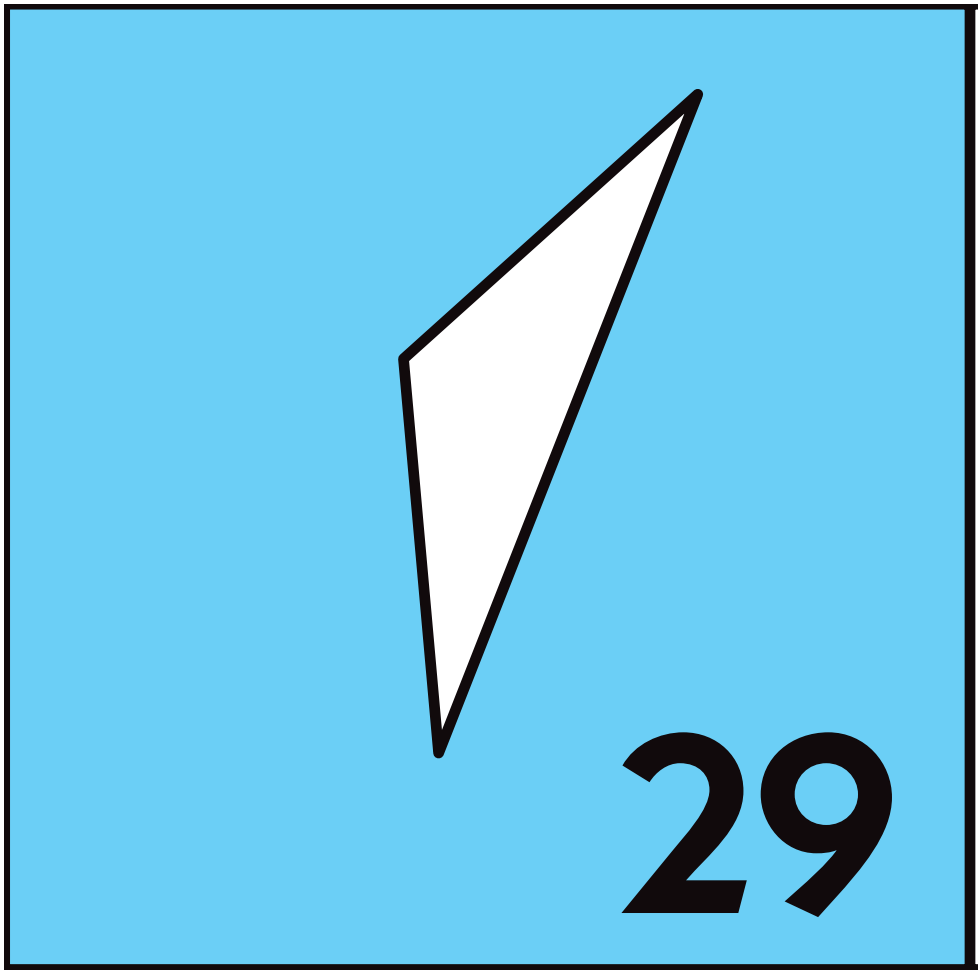

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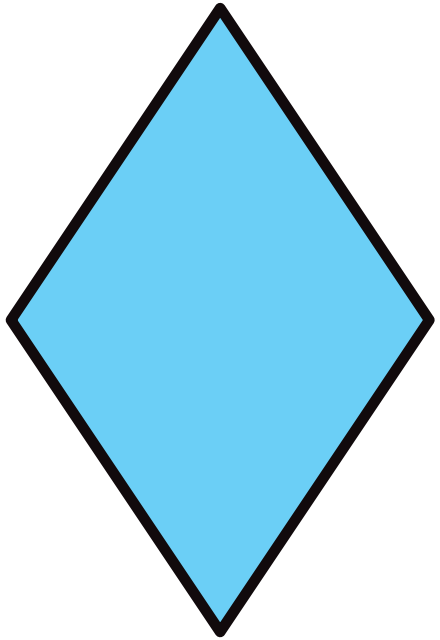

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February 2-D Shapes Attributes Calendar Markers Sheet 16 of 16